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25 November 1977

MEMORANDUM FOR:

FROM : Chief, Special Projects, OSR/SEC

SUBJECT : Questions in Preparation for Presidential Briefing on Civil Defense

1. The chart in the NID on 22 November labeled "Additional Capacity Needed to Avoid Increase in Evacuees" was intended to show a projected short-fall in the implied goal of the Soviet program. Our best estimate of the rate of shelter construction is that the Soviets will have to rely on more rather than less evacuation in the future. On the other hand, they could choose to increase the pace of construction beyond our projection of it. In that case they could keep the ratio of evacuated to sheltered population the same as it is at present by following the dotted line. However, this would require an effort that we do not expect them to make.

2. The four cities in our sample with greater than 10 percent shelter capacity have nothing in common that we have been able to give any statistical significance. We tested size, geographic region, value of industry and number of targets. We also tested the industrial sample by product category and proximity to military concentrations and found no significant correlation. Seaports rated no differently than landlocked cities in the survey.

3. Up until July of this year we used varying bases for estimating occupancy factors. This was because each agency was using its own combination of measurement criteria and occupancy factors. In July we hammered out a compromise. We decided to reduce outside measures of shelters by two-thirds in order to derive a usable floorspace figure and to use a range of occupancy factors instead of a single factor. The range is based at the lower end on a maximum possible occupancy of 0.5 square meters per person, and at

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the other end on 1.0 square meters "design" or "normal" occupancy. The 0.5 meter square figure has been tested by a group of 75 people in the US for two weeks and corresponds to figures our Soviet sources say they have used. The 1.0 square meter figure was derived by applying our measurement criteria to shelters located in photography and by human sources who knew what the intended occupancy of the measured shelters was. We divided available floor-space by intended occupancy and came up with the 1.0 square meter figure for 14 shelters.

4. The 0.5 square meter figure probably makes sense if the shelters are not to be occupied continuously, or are to be occupied for only a short time. However, for the Soviets to plan on this figure nationwide would require ventilation and supplies that we have observed in only a few cases. The 1.0 figure is probably a better nationwide planning figure, particularly if shelters are to be occupied for prolonged periods, or if any useful work is expected to be performed in them.



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